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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,065	12/11/2001	Kazuhiro Nukiyama	0941.66047	7260

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EXAMINER	
MENGISTU, AMARE	
ART UNIT	**PAPER NUMBER**
2673	

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/015,065	NUKIYAMA ET AL.	
	Examiner	Art Unit	
	Amare Mengistu	2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 9-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 9-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 1-5,9-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification as originally filed does not discloses the newly recited claim 1 "***wherein the adjustment of the phase relationship is carried out for the purpose of eliminating phase difference of a signal disposed at a different position in the data driving part***". The specification as first filed has failed to teach one skill in the art how to make or use applicant's claimed invention.

a. The specification as filed has also failed to disclose the newly added claim limitation to claim 9 ***"wherein the timing correcting part makes the clock signal and image display signal supplied by the control part have a predetermined phase relationship there between to eliminate a phase difference of a signal disposed at a different position in the data driving part".*** Thus, the applicant's specification has failed to enable one of ordinary skill in the art at the time of filing to practice applicant's invention.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5,9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Murata et al (6,144,355)** in view of **Tanaka et al (4,713,691)**.

As to claims 1, 2,9, **Murata et al** discloses a liquid crystal display comprising: a plurality of data driving part (fig.4 (24)) taking in image display data in response to a clock signal supplied (col.7, lines 9-21, see, Fig.4 (Data(R), Data (G), Data (B)), Clock (CK, ST)) and causing an image display part to display an image according to the image display data (col.7, lines 13-24); and a control part (figs.1 (10)) adjusting a phase relationship between the clock signal and image display data (col.3, lines 42-48, 64- col.4, lines 5, lines 13-20), a timing correction part (fig.1(14)) provided in each of said plurality of data driving parts, and making the clock signal and image display data supplied by said control part have Predetermined phase relationship there between (col.3, lines 64- col.4, lines 7, col.5, lines 27-37),

Murata et al did not explicitly disclose that the control part detecting a change pattern of the image display data, and adjusting a phase relationship between the clock signal and image display data.

However, **Tanaka et al** suggests a control part detecting a change pattern of the image display data, and adjusting a phase relationship between the clock signal and image display data according to the detected change pattern (see, Abstract, col.1, lines 48-68, col.3, lines 1-5,20-33).

Therefore, it would have been obvious to one skill in the art at the time of the invention was made to have incorporated the change detecting method of **Tanaka et al** in to the LCD system of **Murata et al**, because this will provide a stable sampling can be attained even for a high frequency video signal by setting the optimum delay quantity according to the detected delay quantity.

As to claim 3, **Tanaka et al** discloses that the control part delays only the image display data having a logical levels changing for each clock period of the clock signal (col.1, lines 49-68, col.3, lines 7-33).

In regard to claim 4, **Tanaka et al** also disclose that the control part delays the clock signal (see, Abstract, fig.1 (7,8,9), col.2, lines 45-52).

AS to claim 5, **Tanaka et al** furthermore teaches control part detects the frequency of the clock signal, and adjusts the phase relationship between the clock signal and image data signal according to the detected frequency as well as the detected change pattern (Abstract, col.1, lines 60-68,col.3, lines 24-33, col.4, lines 4-7).

As to claim 10, **Murata et al** teaches that said control part (fig.1 (10)) detects signal transmission time periods required toward the data driving parts, generates a correction signal according to the detected data transmission time periods to be sent to said timing correcting part; and said timing correcting part makes the clock signal and image display data have the predetermined phase relationship there between according to the supplied correction signal (col.3, lines 42-47, col.3, lines 64- col.4, lines 7).

As to claim 11, **Murata et al** also teaches that control part supplies a monitoring data signal common for the timing correcting parts; and each of the timing correcting parts detects a phase difference between the thus-supplied monitoring data signal and the clock signal, and, thereby, make the clock signal and image display data have the predetermined phase relationship there between (col.3, lines 42-47, col.3, lines 64- col.4, lines 7).

Response to Arguments

3. Applicant's arguments filed on 12/06/2004 have been fully considered but they are not persuasive

4. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the

references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Murata et al discloses a display device including a phase adjuster. Tanaka et al teaches a method of adjusting the phase of the sampling clock to the image signal to the optimum level (col.1, lines 58-59). Since both of the references are dealing in adjusting the phase of the clock image signal, they can be combined.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amare Mengistu whose telephone number is (703) 305-4880. The examiner can normally be reached on M-F, T-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (703) 305-4938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Amare Mengistu
Primary Examiner
Art Unit 2673

A.M

Feb. 06, 2006